

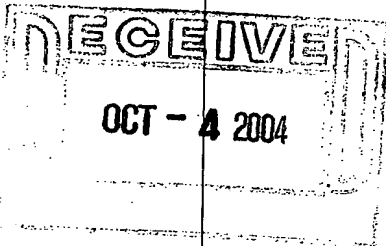
PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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Lisle, IL 60532
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PCT

WRITTEN OPINION
(PCT Rule 66)

Date of mailing
(day/month/year) 27.09.2004

Applicant's or agent's file reference
A1-231-PCT

REPLY DUE within 3 month(s)
from the above date of mailing

International application No.
PCT/US 03/39595

International filing date (day/month/year)
11.12.2003

Priority date (day/month/year)
20.12.2002

International Patent Classification (IPC) or both national classification and IPC
H01R12/20

Applicant
MOLEX INCORPORATED et al.

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20.04.2005

DOCKET FE510
Case No. : A1-231 PCT
Serial No. : _____

Name and mailing address of the international preliminary examining authority:



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I. Basis of the opinion

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, Pages

1-11 as originally filed

Claims, Numbers

1-17 as originally filed

Drawings, Sheets

1/9-9/9 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1,11-16
Inventive step (IS)	Claims	
Industrial applicability (IA)	Claims	

2. Citations and explanations**see separate sheet**

1. The following document is referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: GB-A-1 432 604 (BUNKER RAMO) 22 April 1976 (1976-04-22)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 11-16 is not new in the sense of Article 33(2) PCT.

- 2.1 The subject-matter of claim 1 is not new because document D1 discloses (the references in parentheses applying to this document):

"An connector comprising : a housing (10) including a housing wall (14), a plurality of ribs (23) extending from said housing wall and spaced apart from each other such that a slot (space between walls 27 and "ribs" 23) is defined between adjacent ribs; and at least one terminal (37) positioned within each said slot and connected to said housing (page 2, lines 93-96) such that a surface area of said terminal is exposed to the environment (upper surface in figure 1) and air can flow over said surface area (air can flow in through the apertures 53, 54, 48 and slots 60 and 61) to dissipate heat from said at least one terminal."

- 2.2 The additional features introduced by dependent claims 11-16 are also disclosed in D1:

claim 11: "said wall is a housing central wall (19) and said housing further includes a first housing base wall (14) and a second housing base wall (15) connected to said housing central wall (through walls 12 and 16), said first housing base wall, said housing central wall and said second housing base wall being spaced apart from each other such that a first aperture is provided between said housing central wall and said first housing base wall (20) and a second aperture is provided between said housing central wall and second housing base wall (21), said at least one terminal being positioned within said apertures such that an additional surface area of each said terminal is exposed to the environment and air can flow over said surface area to dissipate heat from said at least one terminal (air can flow in through the apertures 53, 54, 48 and slots 60 and 61)" ;

claim 12, 15, 16: page 2, lines 89-92;

claim 13: page 5, lines 103-129;

claim 14: figure 1.

- 3 Claims 2-10 and 17 appear to meet the requirements of the PCT with respect to novelty and inventive step for the following reasons:

- 3.1 Document D1, which is considered to represent the closest prior art discloses:

"A connector as defined in claim 1, wherein said housing wall (14) is a first housing base wall and said housing further includes a second housing base wall (10) connected to said housing first housing wall (through 12 and 16) and spaced therefrom, each said rib (23) includes a first rib portion (57) and a second rib portion (portion at the left of 57 on the same rib)"

The subject-matter of claim 1 differs from the prior art in that:

F1: "each said rib portions extending from each said housing base wall, each said first rib portion extending from said respective housing wall in a first direction such that each said slot has a first slot portion, and each said second rib portion extending from said respective housing base wall, in a second, opposite direction, such that said slot has a second slot portion."

The objective technical problem is to increase air flow around the terminals.

The solution is provided by the subject matter of claim 1, see especially feature F1. Two portions of the slot receiving the terminal extend out of the housing wall. In these portions the terminal is not covered by the housing wall and is exposed to environment.

The invention is neither disclosed in nor rendered obvious by either one of the prior art documents listed in the European Search Report. F1 is not disclosed in any of these documents. Nothing in these documents indicates the present invention, therefore claim 2 seems to be new and inventive.

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/US 03/39595

- 3.2 Claims 3-10 are dependent on claim 2 and as such also meet the requirements of PCT with respect to novelty and inventive step.
- 3.3 The additional features of dependent claim 17 are neither disclosed in nor rendered obvious by either one of the prior art documents listed in the International Search report.